REMARKS

Claims 18-24 and 26-32 were pending in this application. Applicants herein amend claims 18 and 29. Applicants also add new dependent claims 33-40. Claims 29-32 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the examiner alleges that "the upper limit of less than about 30 nm" is not specifically recited in the specification. Claims 18, 24, 26, and 32 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Austin (U.S. Patent No. 5,508,091). Claims 18-24, 26-27, 32 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Fukuyoshi et al. (U.S. Patent No. 5,667,853) in view of CERAC and Austin.

Claims 29-32 are rejected under 35 U.S.C. § 112, first paragraph, as failing to particularly comply with the written description requirement. In the interest of advancing the application and without conceding the appropriateness of the rejection, Applicants have amended claim 29 to address the Examiner's rejection. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, first paragraph.

Amended independent claim 18 recites a substantially transparent electrode assembly comprising a substrate, a high index layer formed on the substrate, a conductive layer formed on and disposed adjacent to the high index layer, a high index top layer having a conductivity ranging from about 100 ohms/square to about 400 ohms/square and a thickness ranging from about 20 nm to about 100 nm formed on the conductive layer, at least the top layer and the conductive layer being patterned so as to divide the conductive layer into a plurality of discrete electrodes, and a layer of silica disposed on the substrate, the layer of silica in substantially continuous contact with the substrate.

Amended independent claim 29 recites a substantially transparent electrode assembly comprising a substrate, a high index layer formed on the substrate, a conductive layer formed on and disposed adjacent to the high index layer, the high index top layer having a conductivity ranging from about 100 ohms/square to about 400 ohms/square, at least the top layer and the conductive layer being patterned so as to divide the conductive layer into a plurality of discrete electrodes.

Independent claim 18 is patentable over Austin, Fukuyoshi et al., and the CERAC technical publication because none of these references, either alone or in combination, shows or suggests a substantially transparent electrode assembly including a conductive layer formed on and adjacent to the high index layer, a conductive layer formed on and disposed adjacent to the high index layer, a high index top layer having a conductivity ranging from about 100 ohms/square to about 400 ohms/square with a layer of silica disposed on the substrate, the layer of silica in substantially continuous contact with the substrate and a conductive layer formed on and adjacent to the high index layer. An electrode assembly having a conductive layer formed on and disposed adjacent to the high index layer; and a high index top layer having a conductivity ranging from about 100 ohms/square to about 400 ohms/square as recited in claim 29 is not disclosed in the cited references. Finally, the features recited in new claims 33-40 are not taught by the cited references.

In particular, Austin fails to teach a conductive layer formed on and disposed adjacent to the high index layer. As shown in figure 16, Austin teaches a conductive layer 106 disposed between two silicon dioxide layers 105, 107. A third silicon dioxide layer 109 is also shown. The addition of the two extra layers 105-107 detrimentally increases the overall thickness of the optical stack shown in figure 16. The claimed approach wherein the high index and conductive layers are adjacent does not suffer from this deficiency.

Given the presence of the two intervening silicon dioxide layers 105, 107 that surround the conductive layer 106, it is clear that the conductive layer depicted and described in Austin are not disposed adjacent to the high index layer, as recited in claim 18. This follows because the intervening silicon dioxide layers preclude any adjacent contact. As such, the cited reference fails to teach the present invention. For at least this reason, Applicants request that claim 18 and the claims that depend from it be passed to allowance.

The conductivity ranges, layer thicknesses, and other features recited by Applicants further distinguish the claimed invention from the prior art. "While the measurement of a physical property may not of itself impart patentability to otherwise unpatentable claims, when the measured property serves to point up the distinction from the prior art, or advantages over the prior art, that property is relevant to patentability, and its numerical parameters can not only add precision to the claims but also may considered, along with all of the evidence, in determination of patentability." In re Glaug, 62 U.S.P.Q.2d 1151, 1155 (Fed. Cir. 2002). Applicant's experimentation with temperature, fabrication techniques to achieve desired sheet resistances and conductivity levels, and the use of coatings to promote adhesion between the substrate and the lower high index layer, all as evidenced by the claims, further differentiate the present invention from the cited prior art. These factors support a determination of patentability of the present invention and a finding of non-obviousness over the cited references.

Fukuyoshi et al. disclose a multilayered conductive film including a silver-based layer formed of a silver-based metallic material, and first and second transparent oxide layers being independently formed of a compound oxide material of indium oxide. As the Examiner admits, Fukuyoshi et al. fail to teach that the transparent oxide top layer has a conductivity ranging from

about 100 ohms/square to about 400 ohms/square.

Instead, the Examiner states that the CERAC technical publication "teaches that high conductivity is balanced against high transmission in the visible light region, and that indium tin oxide must have a conductivity...or sheet resistance of greater than 100 ohms/square in order to obtain visible region transmission near 90%." The Examiner states that it would have been the result of routine experimentation for one of ordinary skill in the art to use indium tin oxide with a conductivity ranging from about 100 ohms/square to about 400 ohms/square as the transparent oxide top layer of Fukuyoshi et al. However, the present specification states that the preferred materials and processes for forming the top layer are the same as those for forming the insulating layer, except that the condition used to deposit the top layer should be varied so as to give the top layer substantial conductivity. See specification page 8, lines 1-4.

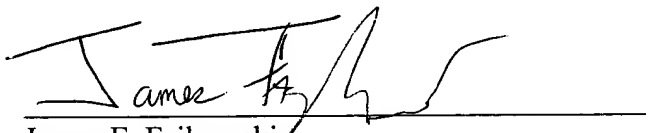
In addition, the CERAC technical publication discloses that the "optical and electronic properties of ITO films are highly dependent on the deposition parameters and the starting composition of evaporation material used." Therefore, there is no suggestion or motivation within Fukuyoshi et al. or the CERAC publication to vary the condition used to deposit the high index top layer and the high index layer in the way suggested by the Examiner to make the present claimed invention. However, even if the cited references disclose what the Examiner claims they disclose, none of the references teach or motivate one skilled in the art to tailor the deposition process to achieve the sheet resistance or conductivity ranges required by the invention. In essence, none of the cited references provide the motivation for one skilled in the art to obtain the specific conductivity ranges recited in the claims.

Conclusion

For the reasons set forth above, Applicants submit that Austin, Fukuyoshi et al., and CERAC, either alone or in combination, fail to anticipate or render obvious the pending claims. Accordingly, claims 18 and 29 and dependent claims 19-24 and 26-28, and 30-40, which depend from independent claims 18 or 29 and contain all of the limitations of the independent claim from which they depend, should be passed to allowance. All of the pending claims are patentable over Austin, Fukuyoshi et al., and the CERAC publication, either alone or in combination, for at least the same reasons set forth above.

Applicants submit that all of the claims are now in condition for allowance, which action is requested. Enclosed is a petition for a one month extension of time with the required fee. Please apply any charges or credits to Deposit Account No. 50-1721.

Date: August 2, 2006



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